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EXAMINER WU, JIANYE				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/657,864

Applicant(s)

HOUCK ET AL.

Examiner

JIANYE WU

Art Unit

2462

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2010.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 9-33 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-6 and 9-33 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/GS/US)
4) ☐ Interview Summary (PTO-413)
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____
Paper No(s)/Mail Date _____

DETAILED ACTION

Response to Amendments/Remarks

1. Applicant's arguments and all other documents filed on 3/29/10 have been fully considered but are not moot because all claims have been amended to which new ground rejections are made.

Claim Objection

2. Claim 14 is objected because it uses both "a Internet Protocol (IP) network" (with a minor grammatical error) and "the internet protocol network" in the claim to refers to the same limitation "IP network", which are not consistent to each other.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. **Claim 1** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites "A method for determining whether to accept a new call to be routed from **the first gateway** to a second gateway in an IP network". There is insufficient antecedent basis for "the first gateway" in the claim.

For purpose of continuation of the prosecution, the claims will be interpreted as best understood.

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the

art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. **Claims 31-32** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 31 recites the limitation “using all of the network congestion parameters”. There is insufficient support in the specification for this limitation in the claim.

Claim 32 has the same problem because it depends from claim 31.

For purpose of continuation of the prosecution, the claims will be interpreted as best understood.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 1, 3, 5, 14-15, 18, 23, 26 and 33** are rejected under 35 U.S.C. 103(a) as being unpatentable over Elliott et al (US 20040022237, hereinafter Elliott) in view of Szabo (US 20020003779 A1).

For **claim 1**, Elliott discloses a method for determining whether to accept a new call (a call between phone 102 and phone 120, FIG. 1) to be routed from a first gateway (gateway 108 of FIG. 1 or 21B; or SS7 Gateway 208 of FIG. 2A) to a second gateway

(gateway 110 of FIG. 1 or 21B; or SS7 Gateway 208 of FIG. 2A) in an IP network (VoIP, [0453] and FIG. 1), comprising the steps of:

obtaining, at the first gateway, information indicative of the quality of service ("latency or packet loss", [0099] in view of Fig. 21B) of voice calls being transmitted from the first gateway to a second gateway via a plurality of network paths between the first gateway and the second gateway (data network 112 of FIG. 1 or 21B that has a plurality of network paths between the two gateways);

determining, using at least a portion of said information, a plurality of congestion status parameters indicative of respective congestion statuses of the network paths ("latency or packet loss", [0099] in view of Fig. 21B); and

Elliott does not specifically disclose determining, using at least one of the congestion status parameters, whether to accept the new call into the network at the first gateway for transmission toward the second gateway via one of the network paths

In the same field of endeavor, Szabo discloses determining, using at least one of the congestion status parameters, whether to accept the new call into the network at the first gateway for transmission toward the second gateway via one of the network paths ("at least one *performance indicator* value read from the RTCP mechanism does **not exceed** a pre-set **threshold** value, the **call is accepted**", [0028]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to apply Szabo's teaching above to the gateways disclosed by Elliott when determining whether to accept a new call or not to ensure the new call will function properly and QoS condition of the network is satisfied.

For **claim 14**, Elliott discloses an apparatus (soft switch 204 in FIG. 2 and 3, with circuit being the means for implementing logic in the soft switch) comprising a first gateway for interfacing voice call data from a public switch telephone network to an Internet Protocol network; said first gateway further comprising:

for determining whether to accept a new call to be routed from a first gateway (gateway 108 of FIG. 1 or 21B; or SS7 Gateway 208 of FIG. 2A) to a second gateway (gateway 110 of FIG. 1 or 21B; or SS7 Gateway 208 of FIG. 2A) in an IP network (VoIP, [0453] and FIG. 1), comprising the steps of:

a first circuit for passing the voice call data to the internet protocol network (the Soft Switch 204 in FIG. 2B);

a second circuit for polling the internet protocol network about traffic information transmitted therein (the Soft Switch 304 in FIG. 2B); and

a third circuit for: calculating, based on the received quality-of-service information, a plurality of congestion status parameters associated with the respective network paths between the first gateway and the second gateway, wherein the congestions status parameters are indicative of respective congestion statuses of the network paths (the circuit in the first gateway responsible for calculating quality-of-service information such as ("latency or packet loss", [0099]); and

obtaining, at the first gateway, information indicative of to the quality of service ("latency or packet loss", [0099] in view of Fig. 21B) of voice calls being transmitted from the first gateway to a second gateway via a plurality of network paths between the first

gateway and the second gateway (data network 112 of FIG. 1 or 21B that has a plurality of network paths between the two gateways); and

determining, using at least a one of the congestion status parameters, ("latency or packet loss", [0099] in view of Fig. 21B).

Elliott does not specifically disclose determining, using at least one of the congestion status parameters, whether to accept the new voice call into the network at the first circuit for transmission toward the second gateway via one of the network paths

In the same field of endeavor, Szabo discloses determining, using at least one of the congestion status parameters, whether to accept the new call into the network at the first gateway for transmission toward the second gateway via one of the network paths ("at least one *performance indicator* value read from the RTCP mechanism does **not exceed** a pre-set **threshold** value, the **call is accepted**", [0028]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to apply Szabo's teaching above to the gateways disclosed by Elliott when determining whether to accept a new call or not to ensure the new call will function properly and QoS condition of the network is satisfied.

As to **claim 23**, Elliott in view of Szabo claim 1, Elliott is silent on accepting the new call into the IP network at the first gateway for transmission toward the second gateway via one of the network paths, wherein the new call is accepted into the IP network in the case of the congestion status parameter associated with the one of the network paths not exceeding an upper threshold.

In the same field of endeavor, Szabo discloses accepting the new call into the IP network in the case of said parameter not exceeding an upper threshold ("at least one *performance indicator* value read from the RTCP mechanism does **not exceed** a pre-set **threshold** value, the **call is accepted**", [0028]; note that RTCP is a protocol for the IP network).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to apply Szabo's teaching above to the gateways disclosed by Elliott when determining whether to accept a new call or not according to KSR to ensure the new call will function properly and QoS condition of the network is satisfied.

As to **claim 3**, Elliott in view of Szabo discloses the method of claim 23, Elliott is silent on said new call is not accepted into the IP network in the case of the congestion status parameter associated with the one of the network paths exceeding the upper threshold.

Szabo further discloses said new call is not accepted into the IP network in the case of the congestion status parameter associated with the one of the network paths exceeding the upper threshold ("one performance indicator value **exceeds** a pre-set **threshold value**, the IP telephony gateway **rejects** the **call** in a step 209", [0028]; note that the performance indicator is a congestion status parameter). The motivation of combination is the same.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to reject a new call in order to reduce the network congestion.

As to **claim 5**, Elliott in view of Szabo discloses the method of claim 1, Elliott further discloses wherein the obtained information comprises, for each of at least one of the network paths, a delay of received packets transmitted from the first gateway to the second gateway via the network path (unacceptable latency, [1493], line 4).

As to **claim 15**, Elliott in view of Szabo discloses claim 14, Elliott further discloses said first circuit further comprises one or more Ethernet cards ("Soft switches 204a, 204b and 204c are connected ... via redundant Ethernet switches", [0568], which suggest Ethernet interfaces with software switches as the first circuit) that are connected to the Internet protocol network.

As to **claim 18**, Elliott in view of Szabo discloses claim 14, Elliott further discloses the third circuit determining whether the new voice call is to be accepted into the internet protocol network via the first circuit, by comparing each of at least one of the congestion status parameter to at least one thresholds (Packet Loss Threshold, Table 147 – continued, page 85, where packet loss values can be used as the thresholds for determining if the new voice call is to be accepted or not).

As to **claim 26**, Elliott in view of Szabo discloses claim 1, wherein determining whether to accept the new call into the network at the first gateway is made using call control logic (as discloses in the parent claim 1), wherein the call control logic is updated using the congestion status parameters (this limitation is the same as the last paragraph of claim 1 in that the call control logic is the one that the determining is based on).

As to **claim 33**, Elliott in view of Szabo claim 1, wherein determining whether to accept the new call into the network at the first gateway comprises:

for each of at least one of the network paths, updating a call admission control policy for the network path based on the congestion status parameter determined for the network path; and determining whether to accept the new call into the network at the first gateway based on the updated call admission control policy (as disclosed by the parent claims 1; note accepting the new call “using at least one of congestion status parameter” is updating a call admission control policy for the network path based on the congestion status parameter).

9. **Claims 4, 6-10, 19-22, 24-25 and 27-32** are rejected under 35 U.S.C. 103(a) as being unpatentable over Elliott in view of Szabo, further in view of Schulzrinne et al., IETF RFC 3550, July 2003 (hereinafter RFC 3550).

As to **claim 4**, Elliott in view of Szabo discloses the method of claim 1, but is silent on the information obtained is a number of send packets to said second location via the network path, wherein the number of sent packets comprises a number of lost packets, a number of late packets and a number of received packets.

RFC 3550 discloses the information obtained is a number of packets sent to said second location via the network path (Line 1 of the paragraph for “Sequence number: 16 bits”, Page 14, where lost packets are those with missing sequence number), wherein the number of sent packets comprises a number of lost packets, a number of late packets (Line 1 of the paragraph for “Sequence number: 16 bits”, Page 14, where late packets inherently are packets that have been sent, but have not been received

according to their sequence numbers) and a number of received packets (sequence number provides information on a number of received packets).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to apply the teaching of RFC 3550 above to the system disclosed by Elliott in view of Szabo for the benefit of getting detailed information regarding network operation.

As to **claim 6**, Elliott in view of Szabo discloses the method of claim 1, but is silent on the information obtained is a delay variation (variation in the delay, Line 5 of last paragraph in Page 44) of received packets transmitted from said first location to said second location via the network path.

RFC 3550 further discloses wherein the information obtained is a delay variation (variation in the delay in RTCP packet, last paragraph in Page 44) of received packets transmitted from said first location to said second location via the network path.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to apply the teaching of RFC 3550 above to the system disclosed by Elliott in view of Szabo for the benefit of getting detailed information regarding network operation.

As to **claim 7**, Elliott in view of Szabo discloses the method of claim 1, but is silent on the information is obtained on a periodic basis

RFC 3550 further discloses the information is obtained on a periodic basis ("based on periodic transmission", first paragraph in Page 19).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to apply the teaching of RFC 3550 above to the system disclosed by Elliott in view of Szabo for the benefit of getting detailed information regarding network operation.

As to **claim 8**, Elliott in view of Szabo discloses the method of claim 1, but is silent on the information is obtained on an exception basis using an immediate report.

RFC 3550 further discloses the information is obtained on an exception basis using an immediate report (Receiver report, first line of Section 6.4 in Page 35). The motivation of combination is the same as described in the parent claim above.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to apply the teaching of RFC 3550 above to the system disclosed by Elliott in view of Szabo for the benefit of getting detailed information regarding network operation.

As to **claim 9**, Elliott in view of RFC 3550 and Szabo discloses the method of claim 1, but is silent on the parameter including packet lost ratio.

RFC 3550 further discloses wherein the parameter include packet lost ratio (packet lost ratio, Line 1 of 3rd paragraph of Section 6.4.4, Page 43).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to apply the teaching of RFC 3550 above to the system disclosed by Elliott in view of Szabo for the benefit of getting detailed information regarding network operation.

As to **claim 10** and **19**, Elliott in view of Szabo discloses 1 and 14, but is silent on wherein PLR is defined as

$$PLR = \frac{(\text{lost packets} + \text{late packets})}{(\text{received packets} + \text{lost packets} + \text{late packets})}.$$

RFC 3550 discloses, by definition, PLR is the *ratio* of the number of *packets NOT received* to number of the *total packets sent* for a given period of time (such as disclosed by "The *ratio of these two* is the packet loss fraction over the interval" in last paragraph of page 43 in RFC 3550); The PLR formula above is simply a math expression of the definition; note that the number of packets that are NOT received equal to the *sum* of the number of lost packets and the number of last packets (*last packets* are the packets that are not received during the time interval but may be received at a later time).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to apply the teaching of RFC 3550 above to the system disclosed by Elliott in view of Szabo for the benefit of calculating PLR using formula shown above for gaining a better understanding of network performance status.

As to **claim 20**, Elliott in view of Szabo discloses claim 19, Elliott further discloses the traffic processing (including new call setup) depends on QoS parameters, including packet loss performance ([1081]);

Elliott does not explicitly disclose the new call is accepted if PLR is below a given threshold;

however, PLR is just one commonly used QoS parameter;

therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to a new call is accepted if PLR that is (calculated by the third circuit, CPU) is below a given threshold for the benefit of providing reliable network service for users.

As to **claim 21**, Elliott in view of Szabo and RFC 3550 discloses of claim 19, Elliott further discloses the third circuit compares the packet loss ratio;

Elliott does not explicitly disclose the new call is accepted using a reduced bandwidth if PRL is between given low threshold and the upper threshold;

however, PRL is commonly used QoS parameter ([1081]); and Elliott also teaches providing different network services depend on QoS parameters, such as delay and packet loss information ([1088]);

therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to a new call is accepted using a reduced bandwidth if PRL that is (calculated by the third circuit, CPU) is between given low threshold and the upper threshold for the benefit of providing reliable network service for users.

As to **claim 22**, Elliott in view of Szabo and RFC 3550 discloses claim 19.

Elliott does not explicitly disclose the new voice call is accepted if PLR is below a given threshold;

however, PLR is commonly used as a QoS parameter ([1081]);

therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to a new call is blocked if PLR that is (calculated by the third circuit,

CPU) is above the upper threshold for the benefit of protecting normal network operation.

As to **claim 24**, Elliott in view of Szabo discloses claim 1, but is silent on the information indicative of the quality of service of voice calls being transmitted from the first gateway to the second gateway comprises a plurality of performance reports associated with the voice calls, wherein determining the congestion status parameters of the network paths comprises: determining, for each of the performance reports, one of the network paths with which the performance report is associated; and determining, for each of the network paths, the congestion status parameter of the network path using at least a portion of the performance reports determined to be associated with the network path.

RFC 3550 discloses the information indicative of the quality of service of voice calls being transmitted from the first gateway to the second gateway comprises a plurality of performance reports associated with the voice calls ("sender report (SR) and receiver report (RR)", 1st paragraph of Section 6.4, page 35), wherein determining the congestion status parameters of the network paths comprises: determining, for each of the performance reports, one of the network paths with which the performance report is associated (SSRC_1 ... SSRC_n in SR shown in SR packet in Section 6.4.1 of page 36 shows the network path associated with the report); and determining, for each of the network paths, the congestion status parameter of the network path using at least a portion of the performance reports determined to be associated with the network path

(one of congestion status parameters "fraction lost", "cumulative number of packets lost", and "delay since last SR (DLSR)", 1st paragraph of Section 6.4, page 35).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to apply the teaching of RFC 3550 above to the system disclosed by Elliott in view of Szabo in order to reduce the network congestion.

As to **claim 25**, Elliott in view of Szabo discloses claim 1, but does not specifically disclose the information indicative of the quality of service of voice calls being transmitted from the first gateway to the second gateway comprises a plurality of performance reports associated with the voice calls, wherein determining the congestion status parameters of the network paths comprises: for each of at least one of the network paths: selecting only a subset of the performance reports associated with the network path; and determining the congestion status parameter of the network path using the selected subset of the performance reports associated with the network path.

RFC 3550 discloses the information indicative of the quality of service of voice calls being transmitted from the first gateway to the second gateway comprises a plurality of performance reports associated with the voice calls ("sender report (SR) and receiver report (RR)", 1st paragraph of Section 6.4, page 35), wherein determining the congestion status parameters of the network paths comprises: for each of at least one of the network paths (each report is for a path): selecting only a subset of the performance reports associated with the network path (congestion status parameters "fraction lost", "cumulative number of packets lost", and "delay since last SR (DLSR)", 1st paragraph of Section 6.4, page 35, are a subset of the report); and determining the

congestion status parameter of the network path using the selected subset of the performance reports associated with the network path (congestion status parameters "fraction lost", "cumulative number of packets lost", and "delay since last SR (DLSR)", 1st paragraph of Section 6.4.1, page 36, are a subset of the report).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to apply the teaching of RFC 3550 above to the system disclosed by Elliott in view of Szabo in order to reduce the network congestion.

As to **claim 27**, Elliott in view of Szabo discloses claim 26, but is silent on for each of at least one of the network paths, the call control logic is updated using the congestion status parameter for the network path periodically.

RFC 3350 discloses for each of at least one of the network paths, the call control logic is updated using the congestion status parameter (one of congestion status parameters "fraction lost", "cumulative number of packets lost", and "delay since last SR (DLSR)", 1st paragraph of Section 6.4, page 35,) for the network path periodically ("each *periodically transmitted* compound RTCP packet **MUST** include a report packet", 1st paragraph of page 22, Section 6.1).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to apply the teaching of RFC 3550 above to the system disclosed by Elliott in view of Szabo in order to reduce the network congestion.

As to **claim 28**, Elliott in view of Szabo discloses claim 26, wherein, for each of at least one of the network paths, the call control logic is updated using the congestion status parameter for the network path on an exception reporting basis ("Sender and

Receiver Reports", Section 6.4 page 35-45; note that Sender and Receiver Reports are exception reporting because they provide exception information like "fraction lost", "cumulative number of packets lost").

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to apply the teaching of RFC 3550 above to the system disclosed by Elliott in view of Szabo in order to obtaining useful network information.

As to **claim 29**, Elliott in view of Szabo discloses claim 1, Elliott further discloses the first gateway comprise a plurality of ports (FIG. 1 shows each gateway 108 and 110 has a plurality of ports) associated with the respective plurality of network paths (FIG. 1 shows plurality of network paths via Data network 112), for each network path: for each of at least one voice call being transmitted from the first gateway to the second gateway via the network path (as shown in FIG. 1).

Elliott is silent on, computing a congestion status value associated with the voice call using the obtained information associated with the voice call; and determining the congestion status parameter of the network path using the at least one congestion status value computed for the network path.

RFC 3550 discloses computing a congestion status value associated with the voice call using the obtained information associated with the voice call; and determining the congestion status parameter of the network path using the at least one congestion status value computed for the network path (each voice call has a path and is associated with the specific report that includes congestion status parameters "fraction

lost", "cumulative number of packets lost", and "delay since last SR (DLSR)", 1st paragraph of Section 6.4.1, page 36).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to apply the teaching of RFC 3550 above to the system disclosed by Elliott in view of Szabo in order to obtaining useful network information.

As to **claim 30**, Elliott in view of Szabo claim 29, but is silent on the congestion status parameter for the network path is determined by selecting the congestion status value computed for the network path that is indicative of the greatest amount of congestion on the network path

RFC 3550 discloses the congestion status parameter for the network path is determined by selecting the congestion status value computed for the network path that is indicative of the greatest amount of congestion on the network path (each voice call has a path and is associated with the specific report that includes congestion status parameters "fraction lost", "cumulative number of packets lost", and "delay since last SR (DLSR)", 1st paragraph of Section 6.4.1, page 36; e.g., select the greatest amount of delay because all other delay value is irrelevant anymore).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to apply the teaching of RFC 3550 above to the system disclosed by Elliott in view of Szabo in order to obtaining useful network information.

As to **claim 31**, Elliott in view of Szabo claim 1, but is silent on the determination as to whether to accept the new call into the network at the first gateway is performed using all of the network congestion parameters.

RFC 3550 discloses the determination as to whether to accept the new call into the network at the first gateway is performed using all of the network congestion parameters (each voice call has a path and is associated with the specific report that includes congestion status parameters "fraction lost", "cumulative number of packets lost", and "delay since last SR (DLSR)", 1st paragraph of Section 6.4.1, page 36; all these parameters can be used for determination as to whether to accept the new call into the network).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to apply the teaching of RFC 3550 above to the system disclosed by Elliott in view of Szabo in order to obtaining useful network information.

As to **claim 32**, Elliott in view of Szabo and RFC 3550 discloses claim 31, Elliott further discloses on accepting the new call into the IP network at the first gateway for transmission toward the second gateway via one of the network paths (as disclosed by the parent claims 1; note that the new call is always accepted via one the network paths), wherein the one of the network paths for the new call is the one of the network paths having the associated congestion status parameter indicative of the least amount of congestion (as disclosed by the parent claims 1: claim 1 discloses congestion information for different paths among which there is one path that has the least amount of congestion).

10. **Claims 2 and 13** are rejected under 35 U.S.C. 103(a) as being unpatentable over Elliott in view of Szabo, further in view of Watt (US Patent number 5781532, hereinafter Watt).

As to **claim 2**, Elliott in view of Szabo discloses the method of claim 23, but are silent on wherein new call may be accepted at a reduced bandwidth in the case of said parameter exceeding a lower threshold.

In the same field of endeavor, Watt discloses adjusting transmission rate in response to a "mild" congestion state, as indicated by the value packet loss ratio exceeding a lower threshold but below an upper threshold, "*adjusting* the transmission rate in response to the detection of said congestion ... when the detected congestion exceeds a predetermined *mild congestion threshold*", from line 21 of col. 7 to line 3 of col. 8).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to accept a new call at a reduced bandwidth in order to fully take advantage of network resource.

As to **claim 13**, Elliott in view of Szabo and Watt discloses the method of claim 2, Elliott disclose further discloses wherein the bandwidth of a newly accepted call is reduced by activating the characteristic of silence suppression for said newly accepted voice call (silence suppression activation timer, table 147 in Page 85).

11. **Claims 11-12** are rejected under 35 U.S.C. 103(a) as being unpatentable over Elliott in view of Szabo and Watt, further in view of RFC 3550.

As to **claim 11**, Elliott in view of Szabo and Watt discloses claim 2, Elliott further discloses using different encoders (CODECs, such as ones supporting G.711, G. 726, and G.728 in [1004]) to handle different connections with different bandwidth ([1004]);

which include the case of using 2 different encoders to handle 2 different kinds of calls that have different bandwidth.

As to **claim 12**, Elliott in view of RFC 3550 and Szabo discloses the method of claim 2, but are **silent on** wherein the bandwidth of a newly accepted call is reduced by increasing the packet size for said newly accepted voice call.

However, for a given amount of data, increasing the packet size will decrease the overhead caused by packet header therefore reduce the required bandwidth for the call, (this is demonstrated by efficiency factor $e = (\text{packet_size}) / (\text{packet_size} + \text{header_size})$; for a fixed header size, the larger is the packet_size, the larger is e);

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to increase the packet size so as to decrease the required bandwidth for the call for the benefit of saving bandwidth resource.

12. **Claims 16-17** are rejected under 35 U.S.C. 103(a) as being unpatentable over Elliott in view of RFC 3550 and Szabo, further in view of Hooper et al (US 20040252686 A1) (hereinafter **Hooper**).

As to **claim 16**, Elliott in view of Szabo discloses the apparatus of claim 14, but are silent on said second circuit is at least one strongarm card.

However, the second circuit is simply a CPU card (such as CPU card of Soft Switch 204, FIG. 2B) that implement the logic of receiving QoS information associated with voice calls, and strongarm is a popular CPU that is commonly used in the CPU cards as disclosed by Hooper ("the core processor implemented as a Strong Arm architecture", [0010]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to use strongarm CPU card as the circuit disclosed by Elliott for the benefit of cost saving.

As to **claim 17**, Elliott in view of Szabo and Hooper discloses the apparatus of claim 16, Elliott further discloses the CPU card (with strongarm CPU) is connected to the Ethernet card via a host CPU circuit (CPU card of Soft Switch 204 is connected to Ethernet switches 332, [0568], line 1-5 and FIG. 2B).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jianye Wu whose telephone number is (571)270-1665.

The examiner can normally be reached on Monday to Thursday, 8am to 7pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571)272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jianye Wu/
Examiner, Art Unit 2462

/Kevin C. Harper/
Primary Examiner, Art Unit 2462